

000 - 1850 - 66

18 April 1966

25X1A

To: [redacted]

From: [redacted]

Subject: INLET AND OUTLET SUIT VENT AIR TEMPERATURE MEASUREMENTS

During our last visit [redacted] we agreed to obtain measurements of the actual suit vent air, both for the inlet and outlet valves. [redacted] has agreed that he can supply the instrumentation to do this and the attached prints show that installation.

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We have made this as a flight test SAM since it is instrumentation work only. We will provide any parts that you desire if you or Bob will advise us which ones.

Everyone would like to see these measurements made as soon as possible since they are crucial in determining exactly what kind of a problem the pilot has in the cockpit in regard to heat and temperature discomfort. We would hope to make measurements on several pilots and several airplanes in order to get data that can be completely evaluated. If this is done immediately we will have temperature data on the present non-insulated suits which can be compared to data obtained from insulated pressure suits which should be arriving [redacted] in the next week or two.

25X1A

25X1

meb

cc: [redacted]

(w/e) ✓

FLIGHT TEST SAM

SERVICE BULLETIN NO.

FOR SHIP/EQPT. SERIAL NO.

125 127 128 129 130

127, 131, 132

TITLE: *INSTRUMENTATION - PRE-
SUIT VENT AIR TEST*

PURPOSE: *TO ACQUIRE TEMPERATURE
DATA ON SUIT VENT AIR.*

WHEN TO BE DONE:

Mandatory -
Safety of Flight

At Convenience

Other _____

KIT

FIRE & G

FIRE & G

Ref. Dwg. No. _____

E&M Manual, pp. _____

Approx. Date Kits Available at BW-1: _____

Est. Manhours

Wt. & Balance Change: _____

to Compl. _____

Parts Affected	Disposition
DIV 208-81-1	REMOVED 17-30-11

Kit Completed by	
Contractor	_____
Date:	_____
Inspector:	_____

DESCRIPTION OF CHANGE:

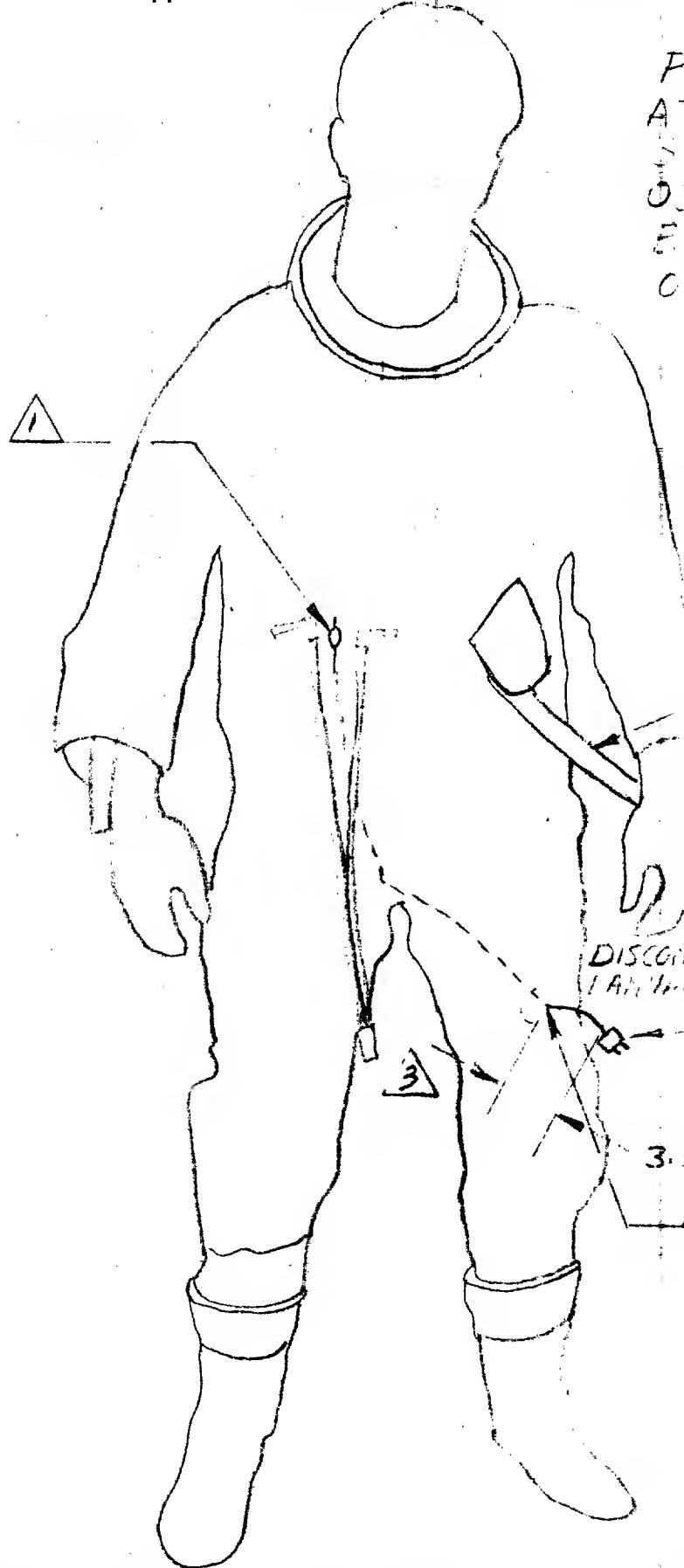
INSTRUMENTATION TO BE ADDED BY: _____

(A) PRESS. SUIT ~

(B) AIRPLANE ~

ALL PARTS ARE

25X1A



1 ADD THERMOCOUPLE

PER E. KORBIN & GATINEAU
AT BN-3. LOCATE INSIDE
SUIT AT SUIT CONTROLLER
OUTFLOW VALVE PER P.
EXPOSE AT BN-3 FOR
OPERATION

2 EXIT AT ALTIMETER
FITTING. EPOXY
AROUND HOLE TO
SEAL AGAINST AIR
LEAKAGE. DRILL MIN.
HOLE SIZE

2. 26.8-18.3 MM

AMO
LINES = 1/4" I.D.
ELBOW - 1" REG.
DRILL 1/4" DIA.
HOLE MISER 1
THERMOCOUPLE
EPOXY TO 1/4" DIA.
LOCATE OUTBOARD
DISCONNECT
JACKETED
TYPE 1400 PLUG, 1/4" DIA.
THERMOCOUPLE 1/4" DIA.
ADJUST PLUG & PATCH
3.00 JACK TO MAX. RELEASE
FORCE OF 10 LBS.
ROUND EXPOSED
CORNER SEE FTAG Q.7
SHEATH NEED TO
PREVENT DAMAGE
WHICH AND INSIDE 1011
DURACO PILOT'S LFG
MATERIAL. AVAILABLE
AT BN-3

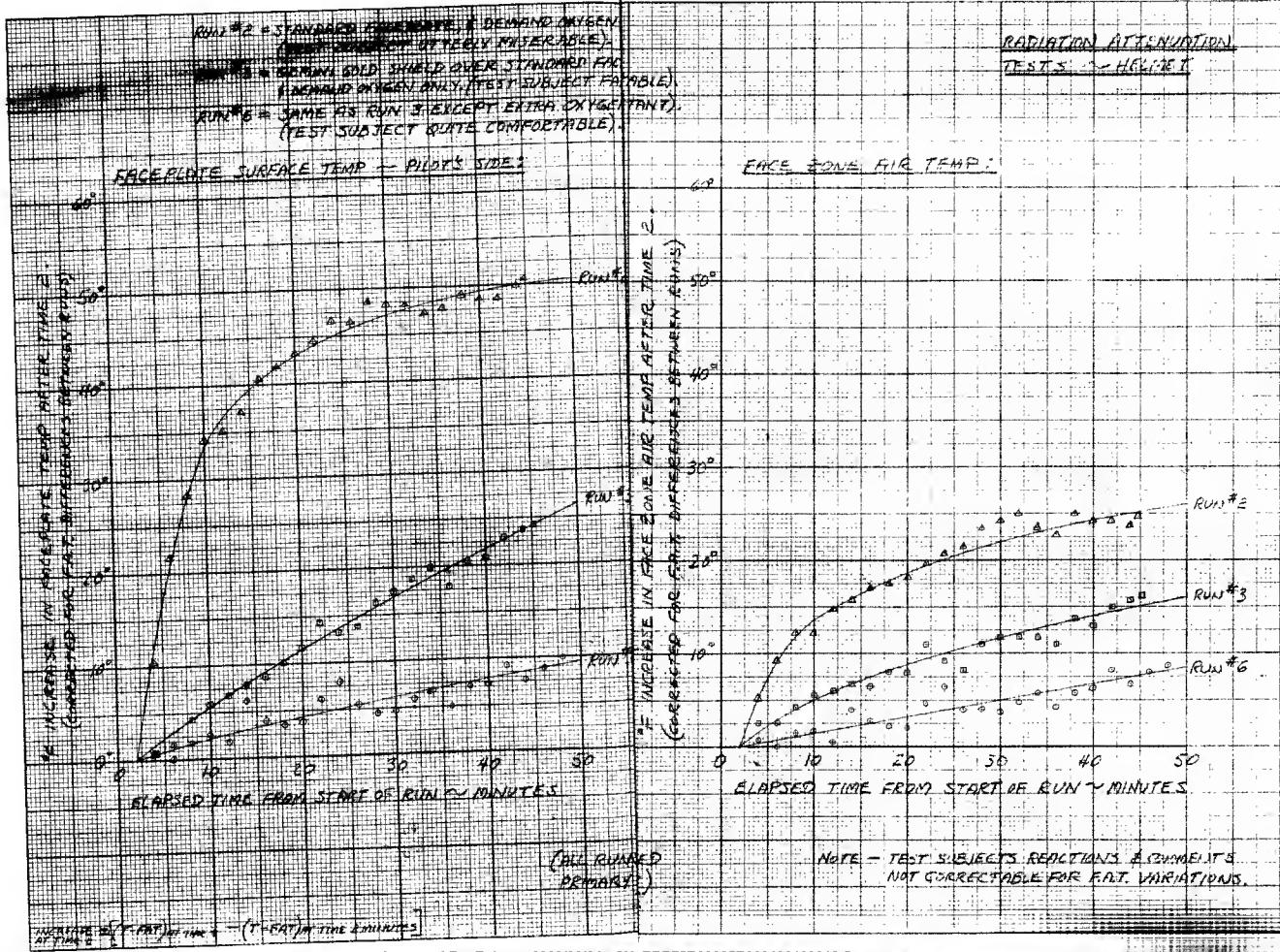
FTAG

INSTRUMENTATION 25X1A
DRAFTED BY T. L. TAYLOR

3 NOTE: MOCKUP AND CHECK LENGTH
WITH PILOTS BEFORE
MAKING

PREPARED BY
DATE 3-7-82
CHECKED BYLOCKHEED CALIFORNIA COMP.
A DIVISION OF LOCKHEED AIRCRAFT CORPORATIONPAGE
MODEL
REPORT NO

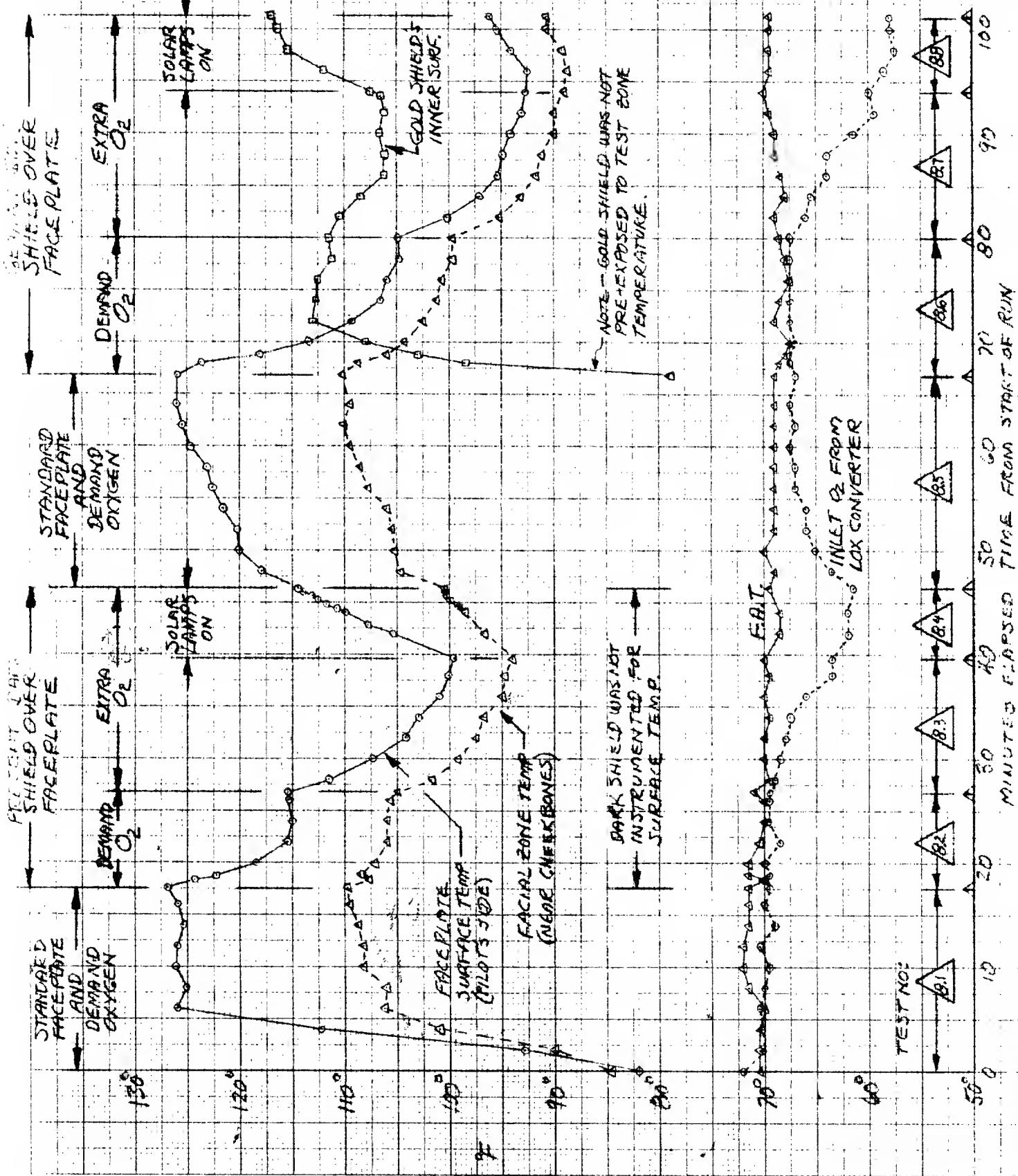
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RADIATION ATTENUATION TEST ~ HELMET

RUN #8 OF 3-8-66, WITH SEQUENTIAL IMPROVEMENTS APPLIED. TEST SUBJECT [REDACTED]

(PRIMARY SPRAY BAR ONLY)



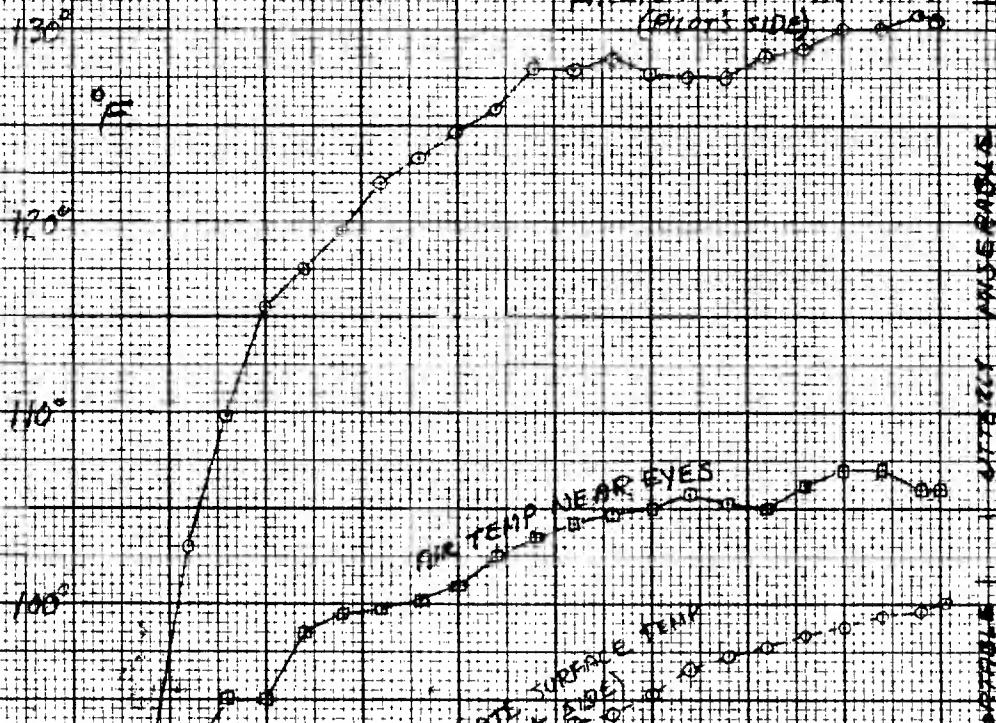
RADIATION ATTENUATION TESTS - HELMET

THESE RUNS MADE WITH ECOM CONVERTER.
PRIMARY BREATHING ONLY.

HOT

TEST SUBJECT: [REDACTED] (COMMENTS)

25X1A

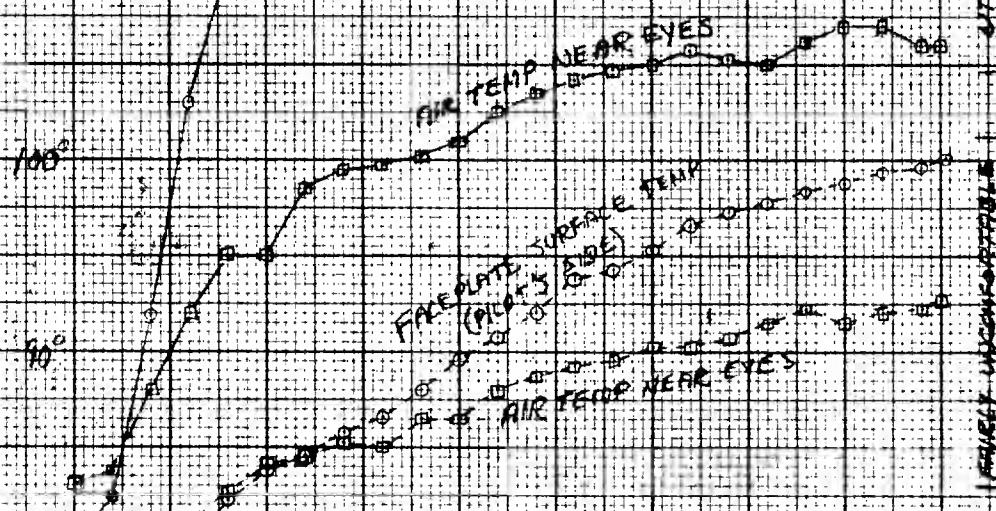
FACEPLATE SURFACE TEMP
PILOT'S SIDE

RUN #2 OF 2-7-66:

STD. FACEPLATE ONLY.
800 TO 850°F CALIBRD SURF.O₂ INLET = 71.4°F (MEAN)

AMBIENT = 71.7°F (MEAN)

DEMAND OXYGEN ONLY.

FACEPLATE SURFACE TEMP
PILOT'S SIDE

RUN #3 OF 3-2-66:

GEMINI GOLD PLATED
SHIELD OVER STANDARD
FACEPLATE.

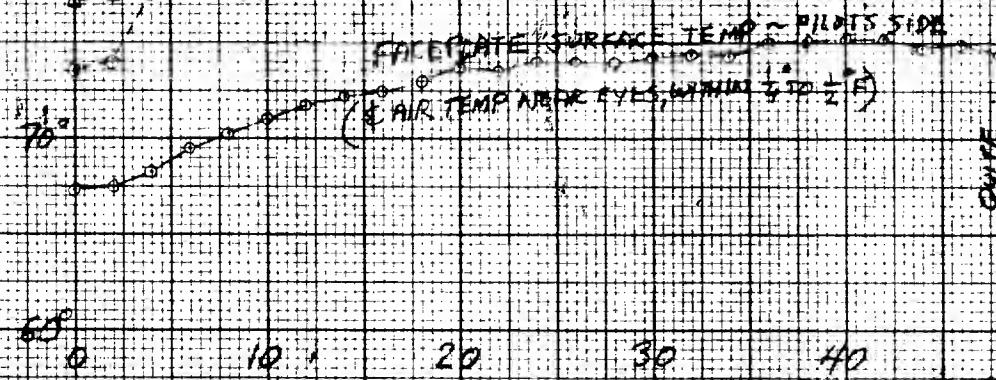
800 TO 850°F CALIBRD SURF.

O₂ INLET = 65.2°F (MEAN)

AMBIENT = 65.4°F (MEAN)

DEMAND OXYGEN ONLY.

FACEPLATE SURFACE TEMP ~ PILOT'S SIDE



RUN #6 OF 3-2-66:

GEMINI PLUS EXTRA O₂
(2.2 LPM TOTAL O₂ FLOW).

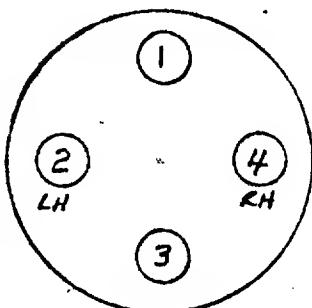
850 TO 880°F CALIBRD SURF.

O₂ INLET = 53.2°F (MEAN)

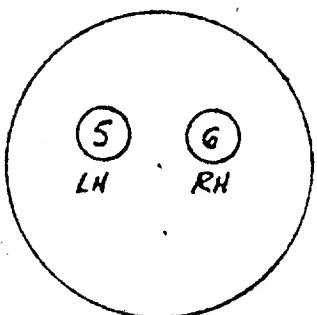
AMBIENT = 59.4°F (MEAN)

TIME ~ MINUTES ~ FROM START OF RUN

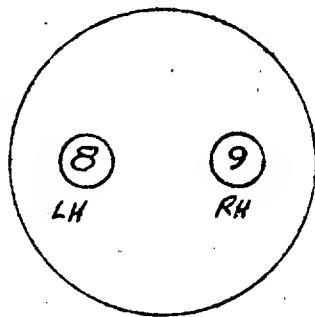
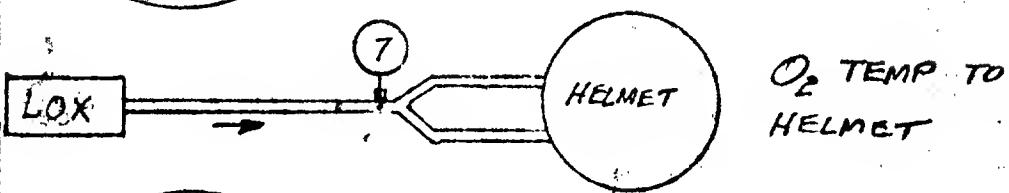
THERMOCOUPLE LOCATIONS - HELMET RUNS



INNER SURFACE OF
FACEPLATE PROPER
(VIEW LOOKING OUT
(FROM SUBJECT'S FACE))



AIRSPACE WITHIN
FACEPLATED ZONE
(NEAR CHEEKBONES)



INNER SURFACE OF
OUTER GOLD SHIELD

10 UNUSED

11 ICE BATH

12 AMBIENT AIR TEMP
AT BROWN RECORDER

DRS

Approved For Release 2002/06/24 : CIA-RDP75B00285B000400130018-5

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1. OMIT

DETERMINE LENGTH FROM MACH J.R. WITH PILOT SITTING IN THE AIRPLANE. SHEATH OUT TO PREVENT FAILURE OF WIRE AND INSULAT ON FROM F.L.O.T. LEG MOVEMENT DURING RUGGED ATTACHMENT B.

DETERMINE LENGTH FROM SEAT VERTICAL ADJUSTMENT.
SEE FIGURE FOR THERMOCOUPLE INSTALLATION IN DH1255-81-1
ELEVEN. WIRE THERMOCOUPLE IN EXISTING SIGHT EYELET.
REPLACE #.5000 AFTER TEST WITH NEW DH1255-81-1 PERMANENT
IN AM90 51948.

5. COORDINATE ALL INSTRUMENTATION OF '87 FIREMAN WITH SW-3, MEMPHIS, TN

② @ BOTTOM OF PAGE

BACK C'SK
PICKUP INSTR PANEL
SCREW

LOWER EDGE
INSTR. PANEL

JMSS JACK -1 REQ. -
AVAILABLE AT BVC

MADE WITH PLUG. ADJUST PLUG TO
SEPARATE 1/8 IN. 0 LBS.
MAX. SEE DETAIL

LOOKING
F'W'D
YTD SIZE

ANCHOR CABLE TO
SIDE 20000E WITH SUITABLE
CLAMP & 1000 SCREENS
LOCATE AT SUITABLE PLACE
FROM MGRUW WITH PILOT SITTING
IN THE AIRRAKE IN SUIT/FTAS. 3 DRAWING

—RUN CABLE ON FLOOR & SIDE CONSOLE
COVER WITH HEAVY TAPE

DETAIL A (FULL SIZE)

INSTALL ON 5/H 125, 127, 128, 129, 130
121, 131, 132

LOCKHEED-CALIFORNIA COMPANY
A DIVISION OF LOCKHEED AIRCRAFT CORPORATION
ADVANCED DEVELOPMENT PROJECTS

ADVANCED DEVELOPMENT PROJECTS

FINISH AS NOTED
TOLERANCES
EXCEPT AS NOTED
 $\pm .03$
 $\pm .006$

NO. REQ.	MODEL	NEXT ASSEM
REQUIREMENTS PER SHIP		
DRAWN		
STRESS		
MATL		
APP'D		
F7AQT		

